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ABSTRACT

This report reviews the history of occupational (or vocational) education in New York City, with special attention to the recent controversies over vocational education programs and the development of the comprehensive high school as an alternative. It is indicated that while occupational education has the goal of training an individual in given skills and competencies in a selected occupation, it is itself a part of career education, a broader concept that includes all educational experiences that lead to economic independence and personal fulfillment. After an analysis of vocational and comprehensive high schools and their ability to meet students' educational and career needs, the report recommends the retention of the vocational high schools (as opposed to their being transformed into comprehensive schools) as valuable sources of high skills training. It is held, however, that comprehensive schools must also be equipped to provide occupational training, and that academic and comprehensive school students should be allowed to take instruction in occupational high schools. Teacher training in occupational high schools and the need for better guidance of students are also discussed. Finally, the report recommends that central administration coordinate all occupational education services and provide a cost-effective delivery system. (WP)

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THE TASK FORCE ON OCCUPATIONAL EDUCATION

A FINAL REPORT

TO THE

CHANCELLOR

BOARD OF EDUCATION OF THE CITY OF NEW YORK

DECEMBER, 1976

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of the
Chancellor's Task Force on Occupational Education

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INTRODUCTION

New York City has served as a magnet to many and diverse populations from all over the world. In many ways, the dreams and hopes of the entire nation are reflected in this complex city. While the magnitude of the problems which beset New York City may set it apart from other areas in the country, by essence the problems are symptomatic of the ills which plague all urban centers throughout the country.

Chronic unemployment among young people is one of the most serious problems facing the city and the nation. Those most vulnerable to chronic unemployment are, of course, the young and marginally skilled, the untrained, the school dropouts. The social, psychological, and economic costs of youthful unemployment are incalculable. Unemployment erodes the hopes of youth and threatens the social and economic structure which has made this country strong and proud.

Unemployment gnaws at the foundation of our society, and its roots reach far into the educational system. While the educational system does not control the cyclical ups and downs of our economic system, it carries within its potential the capability of softening the impact of economic recession on job market entrants and reentrants by providing each pupil with adequate opportunity to acquire a variety of employable skills. Occupational education in its broader sense relates learning with careers, shows the relationship of theory to practice, and generates a sense of direction and purpose to learning.

It is in this context that the role of occupational education takes on enormous significance.

While the value of occupational education for young people in New York City has been demonstrated in many ways, the opportunity for such training has unfortunately not always been available to those secondary school students who express a desire for such training or to those who could benefit from it.

New York City's occupational education programs have been cited for their outstanding quality, and diversity. Nevertheless, the question has emerged as to whether the delivery system for these training opportunities is adequate to meet student demand or the needs of the business community. Questions also continue as to just what learning experiences constitute the best preparation for careers. In a dynamic technological society, issues of specific or generalized skills development must be weighed.

The Board of Education of the City of New York has in the last ten years initiated and sponsored many innovative occupational and alternative programs designed to meet the diversity of student need. It has reviewed and changed major policy in an attempt to improve the system. The effectiveness of these moves must be continually reviewed and it is this need for reevaluation that prompted the Chancellor to constitute a Task Force

on Occupational Education. Its mandate was to evaluate the adequacy of the present occupational education delivery system, and to propose recommendations for its improvement. This, of course, implies a review of Board policy with regard to vocational schools, comprehensive schools, magnet schools and alternative occupational programs.

This report summarizes the findings of the Task Force and its recommendations.

I. Occupational Education in Historical Perspective

The roots of occupational education in New York City are deep, dating back to before the 1920's when only a few industrial high schools existed. Screening of students was highly selective, and the graduates were well prepared to enter college or industry, usually in occupations related to some branch of engineering.

During the 1920's, the school-leaving age was raised from 14 to 16 years. A system of part-time education in continuation school was established for those who left before reaching 16. Later, all youth leaving school before the age of 16 were required to attend continuation schools for half (½) day per week until the age of 17.

The continuation school enrollment grew to over 60,000 students during the 1920's. At first, most of these schools were housed in old buildings, abandoned for other school purposes. A few new buildings were later designed and built specifically for the continuation school program.

The Depression of the thirties precipitated a major crisis in the continuation schools. Students who lost their jobs were required by law to attend school full-time. Schools equipped to accommodate only 1/10 of the continuation program in any one AM or PM session per week now had to provide "some" instruction for all students five (5) full days a week.

Problems of space, curriculum, appropriate machinery, equipment and tools had to be handled on an emergency basis without lead time for planning. Teachers and supervisory personnel were recruited hurriedly. The status of these "impromptu" schools was challenged. Were they elementary or secondary schools? This situation was ameliorated in 1935-36, when the New York State Legislature established vocational high schools as full scale secondary schools. The existing continuation schools were redesignated as vocational schools.

The growth in number, in enrollment, and scope of offerings of the vocational high schools during the late 1930's, was indeed phenomenal, especially in light of the severe limitation on funds for buildings, equipment, supplies and personnel. The "seed money" provided by the Federal Smith-Hughes Act, to encourage the preparation of young people to enter upon gainful employment by means of vocational and general education, proved to be inadequate, especially in view of the fiscal magnitude of the task.

By 1940-41 vocational education was faced with a new challenge, this time national in scope. The United States became engaged in large scale defense production and embarked on urgently-needed manpower training to meet production requirements of the European

I. Occupational Education in Historical Perspective (Cont'd.)

War. Monies and materials were not available for new high schools buildings. Nonetheless, the high schools were called upon to conduct defense and war-industries training programs in addition to regular programs for high school youth during the day, and adults in the evenings. Many vocational and technical high schools operated on a 24-hour, six-day a week basis throughout the war.

The turmoil of the 1960's, which challenged the entire educational community, directed a special challenge to vocational education. Some groups claimed that vocational education was too narrow, its plants inadequate, and the equipment outmoded. Critics argued that it forced students to make career choices too early in life. They alleged that vocational schools were dumping grounds for undesirable students, particularly for minority groups. There were those who claimed that comprehensive high schools should be built for occupational preparation. Comprehensive schools would encourage the intermingling and integration of diverse types of students. Still others advocated a broad secondary curriculum with vocational training deferred until the student advanced to Community, Junior College or Technical Institutes.

As a result of many pressures and counterpressures, the concept of the Comprehensive High School gained popularity. The Allen Commission, for example, recommended a return to a four-year Comprehensive High School (including the 9th grade). A study committee developed a curriculum pattern and recommended an organization for comprehensive education.

In 1967-68 the New York City Board of Education enunciated a policy that:

1. All occupational education be given in comprehensive high schools and existing high schools.

2. all new high schools were to be comprehensive (except the unit trade schools, Aviation High School, Automotive High School, New York School of Printing, High School of Fashion Trades, High School of Art and Design).

3. Existing academic high schools were to be converted to comprehensive high schools by the addition of vocational wings to house shop facilities.

4. existing vocational high schools were to be phased into comprehensive high schools by the addition of academic classrooms.

I. Occupational Education in Historical Perspective (Cont'd.)

During the student unrest of the late 60's, and early 70's, the loudest demands heard were for relevant education. Dr. Sidney Marland, U.S. Commissioner of Education called for a thrust of the total education program towards Career Education (1971).

Certain Problems Remain:

1. What is the best preparation for career and occupation?

2. What is occupational education?

3. Is there one prescribed path of study in occupations for all trades, for children of different interests, and abilities?

4. Is occupational education a program in a particular type of school, or a system of diverse services covering all the schools?

5. How are occupational courses, facilities, equipment and staff training kept up-to-date?

6. What form of leadership or coordination should be established for occupational education in the high schools?

7. What is the relationship of occupational education to secondary education?

II. The Mission of Occupational Education

The well-being, growth and renewal of a society depends to a considerable degree on the availability of a competent work force. In highly sophisticated societies, where advanced skills are required to maintain essential technological services, the very survival of the society is tied to the presence of a qualified work force. It follows therefore, that the source of a competent work force, the educational system, must assume the responsibility for training to fill society's needs. The training must encompass both the broad enabling academic skills, and the specific skills competencies, on multiple levels, consistent with individual capabilities, and with the requirements of the economy.

Career education reflects the inevitable mutual-dependence which exists between the academic and the occupational skills. Career education represents the total process and growth which prepares the individual for a productive role in society. It is a dynamic process which produces not one but many options for career choice and encourages lifelong growth. The high school represents a critical milestone in the career education process. Secondary education has long served as the preparatory stage for the professions, which require post-secondary training. However, the needs of students in the secondary school are diverse, requiring a program with sufficient variety to satisfy this diversity.

Occupational education is an educational process which builds skills competencies based upon individual ability and consistent with individual aspirations. Growth in ability and expansion of aspirational horizons are part of the occupational education process. It provides an avenue of opportunity for mobility across barriers of class, creed and/or national origin. It acknowledges the place of work as a vehicle for social mobility in a democratic society.

Occupational education provides training to develop skills, abilities, understandings, attitudes, work habits and appreciation of the world of work. It provides the knowledge and information needed by our pupils to enter and make progress in employment on a useful and productive basis.

Objectives of Occupacional Education

a) to prepare individuals for entrance into and progress in employment on a useful and productive basis.

b) to develop instructional content derived from occupational analysis of the occupational area, organized in appropriate teaching and learning order.

c) to provide student activities involving work assignments representative of those commonly performed in employment, using similar materials and facilities.

II. The Mission of Occupational Education (Cont'd.)

Objectives of Occupational Education (Cont'd.)

d) to provide facilities, equipment, machinery, tools, supplies which are similar to those commonly used in employment.

e) to develop a program of instruction closely related to the world of work, guided by Advisory Commissions constituted from representatives of industry, labor and the public.

f) to recruit an instructional staff with demonstrated occupational competence, and training in the profession of teaching.

g) to provide programs which are an integral part of the total education process and make a contribution towards the development of good citizenship.

h) to provide a time schedule to assure sufficient exposure to shop and laboratory experiences that are essential to and characteristic of the trade or occupational cluster.

i) to include work-related experiences for relevance and the enhancement of interest and motivation.

Occupational Education should therefore include a systematic program of skills training aimed at achieving specific competencies in a selected occupation or an occupational cluster. Training should be designed in a sequential order, based upon series of skills mastery levels. Training should be preceded by an exploratory or pre-vocational stage.

Both Industrial Arts and Home Economics expose students to tools, machinery, methods, processes related to wide variety of careers. In this way, they serve as a bridge between the exploratory career education phase and the occupational phase and provide students with a sound basis for making an informed career choice.

Occupational Education a Part of Career Education

The world of work requires people on many levels of skills attainment, training and character. Students enrolled in a comprehensive system of occupational programs should reflect a full range of abilities, a cross-section of the whole student body of the community. Occupational education must make its programs available to all pupils, providing training at all levels of ability and interest to meet the many aspirations of pupils.

Career education should be part of the total curriculum from the moment a student enters schools. It should relate reading, writing and arithmetic to the various ways in which adults earn a living.

II. The Mission of Occupational Education (Cont'd.)

Occupational Education a Part of Career Education (Cont'd.)

As the student progresses through school, the skills, knowledge, and above all the attitudes necessary for work success, should be stressed. This stress should be infused into every subject, for every student, not just in separate classes designed for those who are going to work early. Career education is designed to give every youngster a genuine choice as well as the intellectual and occupational skills necessary to support this choice. Career education is not a substitute for vocational or general education or college preparatory education. Rather, it is a blending of all three into an entirely new curriculum. The fundamental concept of career education is that all educational experiences, curriculum, instruction and counseling should be geared to preparation for economic independence, personal fulfillment and an appreciation of work. In the high schools, occupational education represents a vital component, for it provides the pupil with wide opportunity to master the skills and information essential to success in the world of work.

A Comprehensive and Flexible System

Surveys and visitations to schools conducted by the members of the Task Force subcommittees indicate that there are in operation many diverse and excellent programs. Access to these programs is however, limited by restrictive and highly selective school procedures governing entry and transfer to and from programs. Application periods are fixed, with the result that students who make a career selection either before or after prescribed dates are either locked in or locked out of valuable programs. This highly inflexible system is counter-productive and penalizes late bloomers whose decision-making skills ripen in the 11th and 12th grades. The Task Force strongly recommended a more flexible system with city-wide standardized units of training. Standardized training modules would encourage freer movement within the various system components and thus provide greater parity of opportunity to students in all types of high schools at every school grade level.

III. Enrollment of High School Students in Major Occupational Education Programs

Approximately 293,700 students are enrolled in the New York City high school programs. They attend 56 academic, 16 comprehensive, 23 vocational, four special purpose (Music and Art, Brooklyn Technical, Science and Stuyvesant) and 11 alternative high schools for students with special needs. Of the total high school student population, approximately 41,000 were registered in the 23 vocational high schools and Clara Barton and Sarah J. Hale, which are now designated as Comprehensive. In this group, 24,000 devote 10-20 periods per week to training in skilled occupations. The other 17,000 prepare for selected less-than-skilled occupations.

Of the nearly 7,000 who prepare for college or technical occupations, 55% spent ten periods per week in their selected specialty. Among the 8,500 enrolled in health occupations, 3,800 or 44% were assigned ten periods or more per week for skills training. Home Economics has 17,500 students enrolled, with 1,205 actually preparing for occupations in this field. The Commercial, Business and Distributive fields have 70,000 students registered, with 58,000 enrolled in two or more occupational subjects. Agriculture has attracted 1,220 students with 1,100 devoting ten periods or more per week and summers to their studies. In the Industrial Arts 29,000 students are enrolled in one or more occupational subjects with 5,220 spending ten periods per week on one subject.

In summary, within the total high school student population 293,700, 50,900 (17.4% of total) seek preparation for occupations in the trades, industry, technology, agriculture and health areas. In the Commercial and Business areas, 58,300 (19.8% of the high school total) are in training. Industrial Arts, which provides hands-on experience for processes, methods, materials, tools and equipment, as a basis for possible career choices, is an elective for approximately 10% of the student body. Thus, more than one-third of the high school student population prepares either directly or through related instruction for entrance into occupations. One may also assume that all acquired learnings have the potential for career application.

IV. Where Will Graduates Find Work?

A. Occupational Trends

Technology, as it destroys jobs, also creates new ones. While elevator operators are losing their jobs to automatic elevators, new jobs are created in the design, building, sale, installation and servicing of this equipment. But the new jobs are not likely to be filled by the displaced workers, unless they have or acquire the training to meet the requirements of the new jobs. Thus, the economy demands a greater and more advanced occupational education output to fill the shortages of personnel in many skilled professional and technical programs. It will be the personnel in these

IV. Where Will Graduates Find Work? (Cont'd.)

A. Occupational Trends (Cont'd.)

fields who will be most involved in the work that stimulates further technological advance. The primary role of the school is to provide all pupils with skills and knowledge necessary to secure beginning employment at occupations suited to their capacities and the needs of the community. The schools can and should provide the pupil with a sufficiently broad background so that, given the opportunity, he can move up the career ladder.

V. The Occupational Education Delivery System

A. The Chancellor's Mandate

Slightly more than one third of New York City's high school students receive preparation for entry into various levels of occupations. Approximately 50% of all applicants to vocational schools are denied entry for various reasons. Among these are inadequate guidance, failure to pass screening, and inadequate facilities. These facts measured against the ever-increasing demand for skills and, educational background for job entry, place a great strain on the present occupational education delivery system. The question arises as to whether the facilities available in vocational high schools are sufficient to provide the training required by the employing community, whether some of these skills can and are being provided in other schools, and whether there are new occupational needs to which the vocational schools have not addressed themselves. Clearly, a reevaluation of the relationship between available training services and needs must be made.

The Chancellor of the New York City Board of Education, in acknowledgement of the urgency of assessing and evaluating present services, issued a mandate to the Executive Directors of the Division of High Schools and the Division of Educational Planning and Support (Appendix A) to organize a Task Force, with the mission to review the occupational education delivery system and make recommendations for its improvement. The members of the Task Force were to be recruited from industry, public service agencies, trade unions, the U.F.T., the C.S.A., and the school system. Ongoing Task Force activities were to be coordinated by the Chief Administrator of the Center for Career and Occupational Education. The Chancellor's major charge to the Task Force was to assess the adequacy of present occupational education, and to evaluate the effectiveness of present Board of Education policies in providing training services for secondary students (Appendix A).

B. Scope of the Task Force Assignment

The Chancellor outlined four major areas of investigation as a basis for evaluating the existing occupational programs and the policies which direct them:

1. To what extent are our comprehensive high schools meeting the occupational education needs of our students?
2. What changes, if any, should be made in the plan to phase out the multiple trade vocational high schools?
3. What alternative organizational patterns are feasible for high school occupational education?
4. To what extent do the newer comprehensive magnet schools meet the occupational needs of many students?

V. The Occupational Education Delivery System (Cont'd.)

C. Constituency of the Task Force

1. Membership

Membership on the Task Force was drawn from industry, - public service, - trade unions, UFT and CSA, related offices in the school system, Bureaus and High School administrators. (For listing of Members see Appendix B).

2. Organization

With the four components of the Chancellor's directive in mind, the Task Force was organized into the following subcommittees:

A. Comprehensive High Schools - Eli Cohen, Chairman Executive Secretary, Advisory Council on Occupational Education

B. Magnet Schools - Norman Shapiro, Chairman Principal - George Westinghouse Vocational High School

C. Multi-Trade & Unit Trade High Schools - Roxee Joly, Chairman - Superintendent - High Schools (Brooklyn and Staten Island)

D. Alternative Schools & Programs - Daniel P. Marshall, Chairman - Administrative Assistant - Vocational High Schools (For Listing of Subcommittees, See Appendix C)

Additional specialists/consultants were recruited for specific purposes, as needed.

3. Operating Procedures

a) In planning its operating procedures, the Task Force expanded the scope of its inquiry to include all pre-vocational offerings, including industrial arts, and home economics, as well as Guidance and other areas related to occupational education.

b) As a first step, the Task Force conducted a comprehensive survey of existing offerings and physical conditions, including Guidance resources and other critical service areas (See Appendix D).

c) The completed questionnaire (100% return from all secondary facilities) provided detailed data on the status of occupational education services in the New York City secondary school system.

V. The Occupational Education Delivery System (Cont'd.)

3. Operating Procedures (Cont'd.)

d) The Task Force, through its subcommittees, conducted on-site observations of selected schools and programs. Sites were selected on the basis of relevance to the subcommittees' charge and at the discretion of the subcommittees. (List of schools visited in Appendix F)

e) The visiting teams used detailed guidelines (prepared under the direction of the Task Force), to assure uniform and objective observation of the facilities and programs to be evaluated, and to derive maximum benefit from the visits. (See Appendix E)

f) Each of the subcommittees met periodically, exchanged reports, weighed findings and planned visits. Subcommittee interim reports were submitted to the Task Force. The subcommittees agreed upon a common format for the final report which would present their findings and recommendations.

g) A survey among employers of high school graduates was undertaken by the Center for Career and Occupational Education (CCOE). Its purpose was to ascertain the employers' assessment of the appropriateness of preparation and job performance of these students. (See Appendix G)

h) A second study, undertaken by the CCOE was conducted among business and industrial leaders. The purpose of this study was to solicit statements from business leaders relative to the personal qualities and educational attributes, which they deemed vital to the success of the job entrant. The employer listings and questionnaires are contained in Appendix H.

VI. The Subcommittee Reports

A. Comprehensive High Schools

Outcomes of the Comprehensive High School Policy of 1967

The implementation schedule for the construction of new and conversion of existing school buildings (based upon the 1967 Board policy), called for 32 new comprehensive high schools. Eight to thirteen vocational schools were scheduled to be converted to comprehensive status, ten vocational high schools were to be phased out, and occupational facilities were to be added to 51 academic high schools by 1975.

1. Facilities (As of 1975)

   a) Only twelve high schools designated as "comprehensive" had been constructed.

   b) Five of the schools have not yet been equipped with skilled trades shops.

   c) Two of these new high schools designated as "comprehensive" had no provision for a high skills occupational shop program.

   d) Trade and Technical facilities and courses lagged far behind Business, Industrial Arts and Home Economics facilities in time of completion.

   e) None of the 51 comprehensive proposed additions to existing high schools had been built.

   f) Only three multi-trade vocational high schools had been converted to comprehensive status.

   g) Only three obsolete vocational high schools (Yorkville, Metropolitan and Jamaica) had been phased out.

2. Enrollment

   A student enrollment in vocational training of 125,000 was projected for 1975. But there were only 35,000 enrolled in the comprehensive high schools. Two of these schools (Sarah J. Hale and Hillcrest), provided access for approximately one third of their students in skilled occupations training. Most other schools reported a substantially lower number (South Shore, 375 out of 5,500).

VI. The Subcommittee Reports (Cont'd.)

Outcomes of the Comprehensive High School Policy of 1967 (Cont'd.)

3. Instruction, Staff and Administration

a) Curriculum

With very few exceptions, the occupational programs were offered for ten periods a week or less, for two years or less, in contrast to the three or four periods a day for three years required in the vocational high schools. Several of the visiting teams felt the vocational high schools offered training in greater depth. The skilled trades courses were usually not standardized and often were not sequenced. In the judgment of these visiting teams, there was little difference between the skilled-trade and advanced industrial arts courses.

b) Instructional and Supervisory Staff

Some teachers and most supervisors of skilled occupation programs were found to hold industrial arts rather than vocational licenses. Many of these, however, had prior trade experience.

c) Student Commitment to an Occupational Choice

Many young people in the comprehensive high schools seemed to be not ready to make an occupational choice. Many were inclined towards continued education or towards a professional career. Thus, compared to students in vocational high schools, there appeared to be less commitment to a specific occupational choice. With one exception, there was little evidence of strong occupational guidance in the comprehensive high schools visited. Lacking was a guidance process, beginning with career exploration, and advancing to career preparation, including job placement. Enrollment in the occupational education program seemed to be in competition with the college preparatory programs.

With some notable exceptions, the visiting teams observed little distinction between the comprehensive and academic high schools in terms of opportunities for exploration and options for occupational education.

d) Administration

While all of the principals visited expressed a sincere interest in developing occupational education programs, they felt handicapped by the lack of assistance from

VI. The Subcommittee Reports (Cont'd.)

Outcomes of the Comprehensive High School Policy of 1967 (Cont'd.)

d) Administration (Cont'd.)

central headquarters in course planning, curriculum development, etc. Their understanding and acceptance of the nature and functioning of the comprehensive high school varied considerably. As a result, commitment to occupational training as a priority varied.

B. Magnet Schools (Schools offering Educational Options Programs for students outside of the regular school zone)

In the magnet schools, programs of special interest are offered to attract students. These programs range from Aerospace, Oceanography, Health Careers, Agriculture to Electrical Technology and other skilled Occupations. With the exception of Agriculture, Health Careers, Aerospace and Cosmetology in several schools, students participation involves only a small portion of the student body.

While some of the options tend to have a career direction, not enough has been made available to students for skilled occupational training. One school has been transformed from a vocational school to a comprehensive school. The other is essentially a college preparatory school for engineering.

In the newer schools, the visiting teams did not observe full operation of the occupational programs. These lagged behind all other subject areas. Curriculum and facilities in the skilled occupations required additional work in the majority of the schools visited at this time. Some of the comprehensive schools are entering new career fields such as urban problems, computer-related skills, and architecture.

C. Vocational Schools (Multi-Trade and Unit Trade)

1. Facilities

The visiting teams observed that the physical plants show the wear of many years of service and are, in a number of schools, not representative of a modern up-to-date learning environment. Despite the lack of modern equipment and standards, observers reported that the vocational schools were doing a highly effective job in the occupations in which they specialize.

VI. The Subcommittee Reports (Cont'd.)

C. Vocational Schools (Multi-Trade and Unit Trade) Cont'd.)

2. Enrollment

Student enrollment has grown to the point where all but one school operate with enrollment exceeding the rated capacity. The schools were able to admit only between 50 to 60% of the students who applied. However, there is a selective process at work here too.

3. Curriculum

There was evidence that the courses of study were representative of the skilled occupations, with the instructional content derived from occupational analyses. Models of skills standards have been developed for a number of shop programs. The sequence of courses provides for various levels of job entry competencies and advancement on the occupational career ladder. However, there is also need for updating of courses and equipment.

The shop program, organized in a learning sequence and extending over a two and three year time period, provides skills training not only for entry employment, but for advancement on the occupational career ladder. With some notable exceptions, where modular instructional units have been implemented, most courses and programs tend to be inflexible and restricted to the presecribed full two or three year sequence. Thus there remains the question as to whether every trade requires an equal or identical instructional period.

4. Instructional staff and Supervision

The shop teachers and supervisors were experienced tradesmen from industry and the occupations, who are certified as vocational teachers. Their need to be updated in modern industrial curricula, especially in electricity and electronics, is very easily noted. Some efforts are being made to retrain them. Related Technology teachers, who have a stronger academic background, need to relate more closely to the shop teachers in daily and weekly lesson plans. In several vocational schools, the shop teachers were being asked to teach Related Technology in the shop, thus maintaining a four-period shop experience.

5. Student Services

Shop teachers are active in the placement-guidance process and reinforce the grade advisor-guidance counselor system that exists in most schools. There is little formal school-wide job development and career guidance, and students seek employment on their own. A number of schools

VI. The Subcommittee Reports (Cont'd.)

C. Vocational Schools (Multi-Trade and Unit Trade) Cont'd.

cooperate with the New York State Employment Service which assigrs placement counselors to the school. Omnibus counseling is implemented in one school; other programs are in the planning stage. There is a tendency for shop teachers to be the exclusive source of career guidance with the implied danger that a choice once made becomes a final choice. In addition to the usual student publications, student government and other student activities, several schools have organized Vocational Industrial Clubs and their members participate in regional state and national skill competitions in their respective occupations.

6. Community Relations

Advisory Committees representing employers, and unions, in the occupations offered in the schools, were used with varying degrees of effectiveness. The most active seemed to be those serving the unit trade schools, particularly in occupations where certification is required. In multi-trade schools, the representatives cover many trades and thus tend to have less concentrated focus on any single employment area. Direct relationships with unions, essential for job placement, appeared to be fairly loose. Most schools do not have a system of long-range follow-up of their graduates.

7. Administrative Direction

The principals expressed a strong commitment to occupational training for skilled occupations. They recognized the range of employment opportunities (from job entry to journeyman) as essential and vital to occupational education. They call for more central leadership and central staff support for planning, updating of facilities, and equipment. They stressed the need for the maintenance and future development of quality occupational programs.

D. Alternative Occupational Programs

In its search for alternate methods of providing training to greater numbers of students, the New York City School System has instituted a variety of programs, such as Shared time programs, mini-schools, alternative schools, After School Occupational Skills programs, high school-community college joint scheduling, cooperative education, and other work-study programs, and Education Options (schools-within-the school), open to all students.

VI. The Subcommittee Reports (Cont'd.)

D. Alternative Occupational Programs (Cont'd.)

1. After-School Occupational Skills Programs

a) Classes in this program are conducted on a voluntary non-credit basis after regular school hours and supplementary to the student's regular school program.

b) After-school classes provide skills training for entry level jobs. The program serves many disadvantaged public school students, students from "academic" programs who desire skill training, and also secondary students in private non-profit schools.

2. Cooperative Education

There was a general consensus that cooperative education programs (in business occupations, health occupations, horticulture and several trade areas), were a valuable asset. The Task Force agreed that cooperative education was a vital component of the occupational education system, and should be expanded. Nevertheless, observers recognized the practical limits of extending this experience to all students, and indeed expressed some concern that the dependence of the programs on job market conditions exposed students to the hazards of job displacement in times of economic crisis.

3. Alternative Schools

Within the eleven alternative high schools, the occupational offerings varied from job orientation, work study, elementary instruction in typing, business education and some few trade courses. Instruction was limited mostly to the classroom. Hands-on experiences for skilled occupations were scarce or non-existent. Some alternative high schools are now developing proposals and programs in occupational training with the aid of Vocational Education Amendment funds, (VEA).

4. Auxiliary Services for High Schools (ASHS)

In this program, the emphasis is essentially on remedial services, guidance and referral, and preparation for GED. Students may be contracted for private school training, where comparable service is not available, or not feasible in the public sector. There is no internal program for skilled occupational training.

VI. The Subcommittee Reports (Cont'd.)

D. Alternative Occupational Programs (Cont'd.)

5. Shared Time Program

This program has provided a practical alternative for about 1,200 students with identified occupational interest from academic and comprehensive high schools. They attend vocational schools located within reasonable travel distance as part of their total educational program, and receive credit for their training. Significantly, the principals of sending schools reported to the visiting teams that not only the attendance, but the overall academic performance of "Shared" students improved substantially. Throughout New York State there are over 60 part-time centers to which students from various high schools go for occupational instruction. The New York City program for Shared Instruction resembles in many ways existing New York State BOCES. Some progress has been made in encouraging vocational high school students to take such courses as Art, Music, Physical Education, Advanced Mathematics and Science at nearby comprehensive high schools.

6. Skills Centers

There are at present no skills centers operating on the secondary level in New York City. Therefore, the Task Force had no opportunity to observe and evaluate such facilities. The issue of skills centers has received wide attention as a strategy in manpower training. For secondary education, such centers for the delivery of multi-level quality occupational education remain a challenging area of investigation. One of the enticing possibilities is a combination of shared services skills centers. The Task Force was advised that the Center for Career and Occupational Education has received a Federal Grant to develop a master design for testing a model skills center (the Comprehensive Occupational Education Research Project, Part C. Funding, VEA).

7. Educational Options

Nineteen of our Academic and Comprehensive High Schools offer career goal oriented schools-within-the-school which are open to students from out of the geographical zone of the home school. These sub-schools, for example, include School of Agriculture, School of Oceanography, School of Dental Assisting and Technology, School of Urban Planning Construction and Management, School of Criminal Justice. By exploring a large cluster area, students are able to improve their understandings and make informed career decisions either for an immediate

VI. The Subcommittee Reports (Cont'd.)

D. Alternative Occupational Programs (Cont'd.)

(11th year) specialization or for post-secondary concentration. The effectiveness of these schools is being evaluated by the High School Division.

VII. How Does the Business Community View Occupational Education?

New York City's labor force is drawn primarily from the public schools. Realizing the potential value of employer evaluation of secondary school training, the Task Force addressed business leaders, soliciting their views on a number of training-related issues (Appendix H-1). Here are some sample responses from employers to questions addressed to them.

1. What are your expectations of the high school student's performance relative to employment readiness?

   a) They should be competent in written, and verbal communicat on.

   b) They should be competent in arithmetical computations and have some measure of understanding of algebra and trigonometry, as these apply to their special occupation.

   c) They should have appropriate work habits and attitudes to help them get, hold and progress on the job.

   d) They should understand the dynamics involved in working with and for others.

   e) They should have thorough mastery of the basic manual skills and not just theoretical knowledge.

   f) They should understand the language of the occupation, i.e., read drawings, specifications, directions, follow verbal directions and have basic telephone skills for dealing with customers whenever that is part of the job.

2. What Particular Areas of Training Should be Emphasized?

   a) To learn to do a task well requires attention to detail and often involves unpleasant tasks. Students must learn to accept these less attractive duties as part of the job.

   b) To handle tools, equipment and machinery in workmanlike manner.

   c) To master several skills rather than merely have a superficial knowledge of many.

   d) To plan their work as well as follow directions.

   e) To understand that mastery of complex skills takes time and investment, and requires a substantial investment by the employer in machinery, equipment and facilities to enable the worker to produce.

VII. How Does the Business Community View Occupational Education? (Cont'd.)

The specific areas of training recommended include: Service Industries, Machine Industries, Construction Industries, Graphic Industries (not just printing alone), Health Occupations. Each of these areas, and others not mentioned, offer entry jobs, highly skilled jobs and jobs that involve a high degree of technical training. Instruction should be built around the job requirements of the industry and should correspond to an analysis of these task requirements.

3. Are There Areas of Training the Schools Should be Implementing?

New occupations take the place of old. In the semi-skilled area, machines and equipment replace manual labor. Among new fields, the following appear to warrant careful exploration.

Optical Instrumentation, Industrial Control Instruments and Devices, Electronic Maintenance and Repair (especially of data processing equipment); Computer application to industries (machine manufacturing-transportation control), food processing. There is also a need for skilled persons qualified in electronics technology (medical).

4. General Comments

The following general comments are representative of the overall tenor of the responses:

a) Previous mechanical training is an asset for new young employees.

b) The growing trend towards automation and electronic contr makes a practical high school education mandatory.

c) The cost of in-plant training is prohibitive for small plants. Therefore the schools should train students in basic machine shop skills.

d) More of the job applicants should have training in mechanical skills.

e) Our firm has employed young men from vocational schools with some success. There should be more students with similar training.

f) Our difficulty is in finding persons with basic office skills rather than a general education.

g) We would be willing to employ young people with training in shop skills and methods, and office skills, at an advanced scale.

VII. How Does the Business Community View Occupational Education? (Cont'd.)

4. General Comments (Cont'd.)

These responses represent an assessment by leaders in business of the ways in which occupational education can help to meet their needs.

There is also no question that a better working relationship with various unions is needed. In very few cases does a vocational high school graduate receive a union card. Ways should be explored for crediting school learning toward reduced apprenticeship requirements.

Recommendations of the Task Force

Issue: In 1967 the Board of Education formally adopted a policy to phase out Vocational High Schools and transform all school into Comprehensive High Schools. Has this policy fulfilled its promise and does it justify being retained?

Recommendations:

a) *The Task Force recommends that the Policy Decision to phase out all vocational high schools into comprehensive high schools be rescinded on several counts. Clearly, vocational high schools are performing a valuable and major service as a source of high skills training. Despite "benign neglect", they continue to offer a sequential training program, based upon industry standards, which prepares students for entry into employment and for mobility on a career ladder. Exploratory courses are wide-range, providing students with the basis for an informed career choice. To eliminate vocational high schools would in effect close off a primary and effective training source.*

b) *The Task Force vigorously supports a program of plant upgrading and modernization for vocational high schools. Moreover, it also proposes that the benefits of the vocational high schools could be shared by greater numbers if the programs were modified to include short-term and modular sequences. This would provide greater flexibility for entry and exit, (based upon skills-mastery rather than upon fixed and inflexible time schedules).*

Issue: The Comprehensive High School has fulfilled neither the promise nor achieved the schedules set in the 1967 policy. Can the Comprehensive High Schools be strengthened as a source of occupational exploration and training?

Recommendations:

a) *Each Comprehensive High School should be equipped and staffed to provide the occupational shops and laboratories in sufficient number to assure in-depth training opportunities to students who have made an occupational choice. Occupational offerings should be as diverse and as readily available as space and funds will allow, in each of the major skills areas.*

b) *Each Comprehensive High School should include among its offerings exploratory opportunities for all students. Industrial Arts Shops, and Home Economics Labs should play a vital part in a continuum beginning with exploration and leading to specific skills training. They represent a valuable resource for the preliminary phases leading to specific skills training.*

Recommendations (Cont'd.)

c) *Where not now available, Vocational High Schools should add Comprehensive features to provide greater flexibility.*

d) *The Task Force proposes that a system of performance criteria be developed for occupational education within the city-wide system. This would encourage students to advance on the career ladder based upon individual achievement and mastery. The use of modules as a basis for developing performance criteria (already instituted in a number of Vocational High Schools), is highly recommended. It should be developed so that self-paced learning becomes more available and the dependence on a fixed number of hours in a shop is gradually phased out as a criterion.*

e) *City-wide standards whereby each of the stages of learning would be articulated, should be implemented. This would require standardized curriculum and achievement levels. Flexibility of movement within the system would be insured if uniform practices were employed throughout the entire high school system.*

f) *The completion of shop facilities and the installation of equipment in the occupational shops should be expedited. The cooperation of all of the Board and City agencies involved in the processes, should be solicited.*

g) *Efforts must be made to recruit teachers with appropriate occupational qualifications, who are certified as teachers, and demonstrate skill in instruction, and sensitivity to the needs to upgrade reading, writing and computation skills in conjunction with occupational skills.*

h) *More assistance must be given to all the schools in the form of staff and supportive services to 1) implement the standardization of curriculum, 2) to supervise facility planning, and 3) maintain a central resource for all occupational programs.*

Issue: The Task Force conducted selective investigations of some of the many diverse components of the occupational delivery system. Is this diversity justified and if so, what steps are required to facilitate student access to the appropriate type of service?

Recommendation:

The Task Force consensus is that diversity is indeed consistent with the wide range of needs of the high school population served by the Board of Education, and should, therefore, be sustained. The components studied included comprehensive, academic, alternative, magnet,

Recommendation (Cont'd.)

and vocational high schools. Each performs a needed service which justifies its continuation. Each of these components should be articulated and correlated with the others to assure maximum flexibility in meeting the occupational needs of our youth.

Issue: Should Shared Instruction Programs be extended?

Recommendations:

a) The Task Force agrees that while there may be some measure of inconvenience or perhaps hardship in travelling from a home school to a vocational high school, the program has proved worthy of the effort. Approximately 1,200 students in Academic and Comprehensive High Schools, who would otherwise have had no access to desired training, are now profiting from the shared instruction program. Access to academic and comprehensive classes, or post-secondary off-campus experiences should be increased.

b) The Task Force recommends that appropriate linkages be encouraged and established between Vocational and Comprehensive High Schools and sending schools, within reasonable distances, wherever possible. Proximity should be a consideration in planning for the sharing of facilities.

c) Shared use of facilities provides maximal utilization of the limited facilities available. Since shop facilities contain sophisticated and expensive equipment, they should be made available to as many students as possible. Visiting teams observed that some shops were in use for only part of the day. They recommended that full-time use of this underutilized space and equipment be considered as a means of serving many additional students. They recommended that such full-time use extend beyond the school day.

Issue: Recruitment and Admission policies to occupational programs seem to lack uniformity and have multiple standards and criteria. How can these policies be amended so that greater numbers of students are served and with greater equity?

Recommendations:

a) The Task Force recommends that city-wide standards be established for admission to occupational programs regardless of which high school is offering the program. This uniformity would substantially simplify the admissions procedures, and improve access to occupational training.

b) Recruitment of students should be conducted on a city-wide basis, so that information regarding the availability and selection of opportunities in the high schools is made known to every feeder school student. Parochial and other private schools should be included in these efforts.

Recommendations (Cont'd.)

c) *Admissions and graduations other than at the traditional September entry and June departure should be studied. Flexibility in admissions periods and in curriculum structure would obviate the problems which result from entry into the labor market by large numbers of June graduates at a time when job market opportunities are at low ebb. As the modular courses are improved, students can finish their training at various times.*

d) *Transfers from school to school for occupational concentrations must always be possible, and should be facilitated in every way. This is not possible as long as there is no common content and behavioral achievement level pattern. The long standing feud and competition between academic and vocational schools must be halted, with both programs working toward meeting the needs of pupils and society as partners. If the screening for vocational high schools continues to eliminate many very low level readers, special provisions must be made for the occupational education of those students.*

Issue: Teachers of occupational programs need to have trade experience and to remain abreast of industry's practices and standards. Training relevancy in the classroom clearly depends upon the teacher's ability to transmit to young people a sense of the skills and standards currently required for employment.

Recommendations:

a) *Standards must be set to measure occupational competence in the employment of teachers. It is vital that occupational competence be tested by means of objective, standardized comprehensive occupational examination, with special emphasis on performance, rather than on time spent in the trade.*

b) *Professional improvement in occupational skills may require innovative procedures to allow staff to spend time in industry to update skills, "work" methods, and procedures in the occupation. By returning periodically to industry and business, occupational teachers will not only maintain current skills and occupational information, but have the opportunity to observe new trends and update curriculum in accordance with employment demands.*

c) *Inservice training programs and industry workshops will also help keep the staff up to date.*

Issue: Thousands of students (14,000-15,000) who apply for admission to vocational high schools are not accepted and are required to attend another school, which may not offer preferred occupational choices. Since training in preparation for employment should be available to all who desire it, how can we meet the needs of these and other students who seek specific training?

Recommendations:

a) *The Task Force subscribes to the national policy which encourages every secondary student to develop a marketable skill regardless of his/her ultimate career goal.*

b) *Present services, in the vocational, comprehensive, and academic high schools, as well as the alternative programs, need to be expanded to accommodate students with unmet needs.*

c) *Expansion and diversification of programs should be undertaken as part of a comprehensive system, in which each of the components has a related function. This system should be under the leadership of a central administrative agency.*

d) *Improved career guidance services are essential to help direct pupils toward achievable goals.*

Issue: Students lack sufficient guidance support at all levels to assist them in developing the understandings necessary for career decision-making and job placement.

Recommendations:

a) *District guidance sessions should be conducted to present the full range of career options available in the high schools. Since guidance services in the Districts have been cut drastically, other monies must be allocated to this service.*

b) *Continuing career guidance emphasis should be encouraged in the vocational, magnet, alternative, academic and comprehensive high schools. Assistance in finding appropriate training opportunity should be available to students on an ongoing basis, as they mature and become aware of their interests and capabilities, and they should be encouraged to move freely within the total system to fulfill these interests. This will require additional funding for Pupil Personnel Teams in the high schools.*

c) *Staff development programs to sharpen counselor awareness should be expanded, both through in-service programs and through articulation with graduate training institutions.*

Recommendations (Cont'd.)

d) *Support for student activities in career-oriented clubs should be strengthened, with provision for recruitment and guidance in club activities.*

Issue: Central administration is required to coordinate all occupational education services and provide a cost-effective, efficient and quality delivery system.

Recommendations:

a) *Occupational offerings should follow a well-organized, carefully planned sequence, with occupationally-derived content, standardized achievement levels, standardized evaluation instruments, and equipment, facilities and machinery which are characteristic of the occupations.*

b) *Instructional standards, recommended for city-wide implementation, require central coordination. Standardization of both curriculum practices and shop facilities requires leadership and direction from a central source.*

c) *The diverse components of the delivery system can best serve the variety of student need if they are integral parts of a comprehensive system, with central leadership.*

Summary Recommendation

a) There is a pressing need for improved central headquarters leadership to assist principals and staff in the improvement and promotion of occupational education in the high schools, to formulate guidelines and operating principles for all of the components of occupational education, to coordinate the guidance, curriculum, staff recruitment and placement activities, to improve instruction, facilities, maintenance and supplies. All of these functions have in the past been performed by various agencies, some of which have not been functioning for some time, and others which have suffered from major retrenchment and loss of staff.

b) Central administration, under the leadership of a full-time Assistant Superintendent with line responsibility, would provide the leadership for the comprehensive delivery system. The Assistant Superintendent should 1) formulate guidelines and operating principles for all components of occupational education throughout the secondary syste; cnd 2) coordinate all other component parts of the occupational delivery system.*

* Note

Members of the High School Division, in reviewing the Task Force Report, raised objections to the Task Force recommendation which deals with Central Office leadership. They have objected to the Task Force proposal that an Assistant Superintendent be assigned to furnish this leadership on the grounds that this may lead to a "renewed separation" of the Vocational High Schools from the current "partnership" with other high schools. The High School Division proposed instead that "further consideration should be given to a structure which can offer positive staff leadership to career and occupational programs in the high schools without undue modification of current line responsibilities of high school superintendents."